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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,242

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Karl-Hans Fuchs

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EXAMINER

CLEMENTE, ROBERT ARTHUR

ART UNIT

PAPER NUMBER

1724

MAIL DATE

DELIVERY MODE

07/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/648,242

Applicant(s)

FUCHS ET AL.

Examiner

Robert A. Clemente

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5 – 7, 10, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,048,776 to Moore et al.

Moore teaches a combined building air-conditioning unit and NBC protection system, comprising an enclosed space housing a building air-conditioning unit and further including a plurality of chambers; a first chamber having an ambient air inlet port, at least one prefilter and a blower for sucking air through said prefilter; a second chamber having valve means having an open and closed state, receiving air from said blower and accommodating a C-detector and a valve means actuator, responsive, at least indirectly to, and operable by, said C-detector, and a third chamber housing at least one C-filter' and a blower for sucking air from said second chamber via said C-filter into the building when said valve means is in its closed state. See figures 1 and 2, and the respective portions of the specification. Figure 2 shows a block diagram for a combined HVAC and NBC protection system. The HVAC system (200) is inherently enclosed in a housing, which can be considered a first chamber. The HVAC system

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includes filter media (201) and an air blower (202). The filter media (201) can be considered at least one prefilter since it is upstream of the further treating means. The Air Cleaning System (ACS), or NBC protection system, is interposed within a plenum of the HVAC, as disclosed in column 5 lines 35 – 36. The structure of the ACS system (100) is shown in figure 1. The conduit (not numbered), including the chemical detector (110), irradiation zone (121), and saturation zone (131), can be considered a second chamber. The bypass zone (151) is located off of the second chamber and can be considered a third chamber. The flow diverters (152) include a shunt (not numbered), or valve, shown in the second chamber. When closed the shunt directs air into the bypass zone (151), or third chamber. As disclosed in column 4 line 35 – 36, the shunt is controlled by the chemical detector (110) and inherently must have an actuator means for it to open and close. The bypass zone, or third chamber, includes a high speed blower (153), which sucks in air from the second chamber and passes it back through the HVAC system to the building. Directly downstream from the blower the third chamber includes activated charcoal filters (155), or chemical filters.

In regard to claims 5 and 6, the detector (110) inherently must have a transmitter coupled to it in order to control the valve means of the flow diverters (152). Further, the flow diverters (152) must have a receiver in order to receive the control signal and actuate the closing of the valve.

In regard to claim 7, as disclosed in column 4 line 23 – 35, the chemical detector diverts flow to the blower (153) and chemical filter (155) after identifying hazardous chemical agents.

In regard to claim 10, the high-speed blower (153) with the chemical filter (155) is inherently operable to enhance the overpressure inside the building.

In regard to claim 13, all of the structural limitations of the claim have been discussed above. The operation of the system of Moore inherently teaches the claimed method.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 4, 8, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of US Patent No. 7,052,525 to Kang et al.

Moore is discussed above in paragraph 2. Moore does not disclose the specific type of chemical detector used or that the detector includes a transceiver. Kang discloses a NBC protective system integrated within a vehicle. As shown in figure 1, the

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system includes a detection subsystem (2) linked to a control subsystem (6) that activates a valve (3) when hazardous agents are detected. In regard to claim 4, as disclosed in column 6 lines 60 – 67, an ion mobility spectrometer can be used in the detection subsystem and is well known to be used as a detector for hazardous chemical agents.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Moore to include an ion mobility spectrometer as suggested by Kang since it is well known in the art to use such devices for detecting hazardous chemical agents.

In regard to claims 8, Kang also shows in figure 1 that the control subsystem (6) can be linked to local area data networks (16). As disclosed in column 8 lines 57 – 60, in a civilian context the local area networks can be implemented using WiFi or Bluetooth technologies. Therefore the detector would inherently include a transceiver. As disclosed, the network allows for information about chemical, biological, or nuclear attacks to be disseminated to local, state, and national emergency responders to facilitate decision-making. As disclosed in column 8 lines 39 – 40, the communication could also be used to alert other vehicles in the area to activate their protective systems.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Moore to include a transceiver linked to the detector as suggested by Kang in order to allow emergency responders near-real-time information about the attack so they can make better informed decisions.

In regard to claim 9, inherently in the combination of Moore and Kang when the transceiver receives information about a nearby chemical attack, the ACS system (100) in Moore would be activated, closing the shunt valve and directing air through the blower (153) and chemical filter (155).

In regard to claim 14, all of the structural limitations of the claim have been discussed above. The operation of the system of the combination of Moore and Kang inherently teaches the claimed method.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of US Patent No. 5,042,997 to Rhodes.

Moore is discussed above in paragraph 2. Moore discloses a HVAC system (200) that includes filter media (201), which acts as the prefilter in the combined HVAC and air cleaning system. Moore, however, does not disclose the type of filter media that is used. Rhodes teaches an environmental control system including an air conditioning unit with an air cleaning system, as disclosed in column 2 lines 14 – 20. Further, as disclosed in column 2 lines 22 – 30, the air cleaning system includes filters that can trap biological hazards, such as plant spores, bacteria, and viruses. The filters are also capable of controlling noxious gases, or chemical contaminants.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Moore to include filters capable of protecting against chemical and biological contaminants in the HVAC system as suggested by Rhodes since it is known in the art to use these types of filters in air conditioning systems.

Allowable Subject Matter

7. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claim 11, the bypass zone (151), or third chamber, of Moore opens into the conduit of the air cleaning system (100), or second chamber. There is no teaching or suggestion in Moore of having these two chambers share at least a portion of a common wall.

In regard to claim 12, there is no teaching or suggestion of an airlock in Moore. Further, the examiner did not find any prior art that would fairly suggest modifying Moore to include an airlock unit communicating with one of the chambers.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Other prior art references listed on the PTO-892 (Notice of References Cited) are considered to be of interest disclosing similar air conditioning protective systems.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Clemente whose telephone number is (571) 272-1476. The examiner can normally be reached on M-F, 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert A Clemente
Examiner
Art Unit 1724

RAC

D-16-27-07
DUANE SMITH
PRIMARY EXAMINER